Basco Fire
Emergency Stabilization Plan
and Rehabilitation Plan
Environmental Assessment,
Elko County, Nevada
BLM/EK/PL-2006/025

Prepared by:
Department of Interior-Burned Area Emergency Response Team

For Submission to:
Department of Interior-Bureau of Land Management
Elko Field Office

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1.0 - Purpose and Need for Action

A. BRIEF DESCRIPTION OF PROPOSED ACTION

The Basco Fire was ignited by lightning on July 26, 2006 and burned 27,014 acres of Bureau of Land Management (BLM) managed public lands and 20,171 acres of private land by the time it was contained on August 2, 2006. This fire was located in Elko County, Nevada. The Department of Interior (DOI) ordered a National Interagency Burned Area Emergency Response (BAER) Team to assess the damage to BLM lands managed by the Elko Field Office and prepare an Emergency Stabilization Plan. The Field Office would prepare the Rehabilitation Plan. See Chapter 2.0 for a detailed description of the proposed actions (specifications) for the Basco Fire Emergency Stabilization Plan (ES Plan) and Burned Area Rehabilitation Plan (BAR Plan).

All projects proposed in the ES and BAR Plans that are prescribed, funded, or implemented by Federal agencies on Federal, State, or private lands are subject to compliance with the *National Environmental Policy Act* (NEPA) in accordance with the guidelines provided by the *Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508)*. This Environmental Assessment (EA) has been developed in accordance with BLM specific guidelines. Emergency stabilization and rehabilitation actions proposed on BLM lands, involving the agency's permitting, funding, or implementation, must comply with regulations set forth in the *Department of the Interior Manual Part 516 (DM 12),*and policies described in *BLM Handbook H-1742-1*.

The Proposed Action includes the following treatments previously analyzed and mitigated in the FY2000 Normal Fire Rehabilitation Plan Environmental Assessment Treatments: 1 Grazing Closure, 2 Planting of Multiple Species Seed Mixtures, 3 Planting of Native Shrub or Tree Seedlings, 5 Dozer line Rehabilitation, 6 Road Repair, 8 Invasive, Nonnative Weed Control, 9 Site Preparation Treatments, and 10 Cultural resource site stabilization and protection.

B. PURPOSE AND NEED FOR ACTION

The purpose of this ES Plan is to determine the need for and to prescribe and implement emergency treatments (specifications) to minimize threats to life or property or to stabilize and prevent further unacceptable degradation to natural and cultural resources resulting from the effects of a fire.

C. PROJECT AREA DESCRIPTION

The Basco fire occurred in the northwestern part of Elko County, Nevada in the Tuscarora Mountains. Elevations within the burned areas ranged from 5,661 feet (1,726 meters) to 8,184 feet (2,495 meters) above mean sea level. The legal description in the Mount Diablo Baseline & Meridian for the Basco Fire is:

Township 36N, Range 52E, Sections 1, 2, 11, 12
Township 36N, Range 53E, Sections 1-18, 20-28, 34, 35
Township 36N, Range 54E, Sections 3-10, 15-23, 27-30
Township 37N, Range 52E, Sections 24, 25, 35, 36
Township 37N, Range 53E, Sections 13-36
Township 37N, Range 54E, Sections 2-4, 8-11, 15-22, 28-34

D. CONFORMANCE WITH APPLICABLE LAND USE PLANS

The proposed action conforms to the 1987 Elko Resource Management Plan (RMP), as it was amended for fire management on September 29, 2004. The decision for fire rehabilitation from the Approved Fire Management Amendment, page 20, is to "Conduct fire rehabilitation activities to emulate historic or pre-fire ecosystem structure, functioning, diversity and/or to restore a healthy stable ecosystem." The proposed action is consistent with resource objectives of the plan and with other Federal, state, local and tribal laws,

regulations, policies and plans to the maximum extent possible.

This EA tiers to the Elko and Wells Resource Management Plans Fire Management Amendment Environmental Assessment (BLM/EK/PL-2003/026) that was completed in 2003 and the FY2000 Normal Fire Rehabilitation Plan Environmental Assessment (BLM/EK/PL-2000/037), which was completed to update and replace the FY93 Normal Fire Rehabilitation Environmental Assessment (EA-NV-010-92-060). These EA's analyze the wide range of treatments utilized by the BLM, Elko Field Office, for emergency stabilization and rehabilitation activities on public lands. The proposed treatments for emergency stabilization and rehabilitation are consistent with the treatments described in the above two EAs and associated Findings of No Significant Impact. The general description and impact analysis of the emergency stabilization and rehabilitation treatments is also described in these EAs.

Proposed treatments for invasive non-native species are consistent with the methods described and evaluated in the Vegetation Treatment on BLM Lands in Thirteen Western States, Final Environmental Impact Statement (FEIS) and Record of Decision and the Programmatic Environmental Assessment of Integrated Weed Management on Bureau of Land Management Lands (BLM/EK/PL-98/008) for the Elko Field Office and Finding of No Significant Impact.

E. APPLICABLE LAWS AND EXECUTIVE ORDERS

This section documents consideration given to the requirements of specific environmental laws in the development of the Basco Fire ES and BAR Plans. Specific consultations initiated or completed during development and implementation of these plans are also documented. The following executive orders and legislative acts have been reviewed as they apply to the Basco Fire ES and BAR Plans.

1. **National Historic Preservation Act (**16 U.S.C. 470**).** The BAER Team Cultural Resources Specialists have contacted the Nevada State Historic Preservation Office (SHPO) regarding activities proposed within the Basco Fire Emergency Stabilization Plan.

2. **Executive Order 11988, Floodplain Management.** All proposed treatments are in compliance with this order.

3. **Executive Order 11990, Protection of Wetlands.** All proposed treatments are in compliance with this order.

4. **Executive Order 12372, Intergovernmental Review.** Coordination and consultation is ongoing with affected Tribes, Federal, and local agencies. A copy of the plan will be disseminated to all affected agencies.

5. **Executive Order 12892, Federal actions to address Environmental Justice in Minority and Low-Income Populations**. All Federal actions must address and identify, as appropriate, disproportionately high and adverse human health or low-income populations, and Indian Tribes in the United States, The BAER Team has determined that the actions proposed in this plan would result in no adverse human health or environmental effects for minority or low-income populations and Indian Tribes.

6. **Executive Order 13112, Invasive Species.** To prevent the introduction of invasive species and provide for their control, and to minimize the economic, ecological and human health impacts that invasive species cause.

7. **Endangered Species Act** (16 U.S.C. 1531-1544, 87 Stat. 884)**.** The BAER Team wildlife biologist and vegetation specialists have consulted with the U.S. Fish and Wildlife Service regarding actions proposed in this plan and potential effects on state and federally listed species and have determined that the actions proposed will not affect listed species. Rather, a number of these actions are likely be beneficial (Chad Mellison, biologist, U. S. Fish and Wildlife Service, Reno, Nevada, personal communication 8-16-06 and 8-17-06). The Field Offices are responsible for continued consultations during plan implementation under provisions of the Programmatic Biological Opinion for the Elko Fire Management Plan issued by the U. S. Fish and Wildlife Service on December 5th of 2003.

8. **Clean Water Act.** All proposed treatments are in compliance with this Act (33 U.S.C. 1251 - 1376; Chapter 758; P.L. 845, June 30, 1948; 62 Stat. 1155). Long-term impacts are considered beneficial to water quality.

9. **Clean Air Act.** Federal Ambient Air Quality Primary and Secondary Standards are provided by the National Ambient Air Quality Standards, as established by the U.S. Environmental Protection agency (EPA) (Clean Air Act, 42 U.S.C. 7470, et seq., as amended). The BAER Team has determined that treatments prescribed in the Basco Fire area would have short-term minor impacts to air quality that would not differ significantly from routine land use practices for the area. The treatments proposed in this plan would have long-term beneficial affect on air quality.

F. ISSUES CONSIDERED

During the initial agency briefing meeting with the DOI Interagency BAER Team on August 5, 2006, the Elko Field Office and the Winnemucca Field Office identified the following biological, cultural, and other environmental resources issues potentially affected by the fires and/or suppression activities:

<u>Human Health and Safety</u>
- Dust
- Road Conditions
- Minor Facilities
- Mine Access

<u>Soil/Watershed Stabilization</u>
- Burn Severity

<u>T&E/Special Status Species Habitat Stabilization/Recovery</u>
- Lahontan Cutthroat Trout (TES)
- Columbia Spotted Frog (TES *C=candidate)*
- Nevada BLM Sensitive Bird and Mammal Species
- Spotted Frog (TES)
- Riparian Habitat Recovery
- Sage Grouse Habitat Recovery (BLM Sensitive)
- Big Game Species Habitat Recovery

<u>Cultural Heritage Resources</u>
- Cultural Resource Sites

<u>Invasive Plants/Vegetation Management</u>
- Grazing Allotment Management
- Fence and Range Improvement
- Vegetation Mortality
- Noxious Weed Control
- Suppression Impacts

All of the above mentioned issues are addressed in specifications (found in Part F) and/or management recommendations (found in the Resource Assessments, Appendix I). The Proposed Action is to implement the treatments as described in the specifications (Part F). The table below shows how the major issue categories are related to the resource areas and treatment specifications.

Table 1. Issues, Discussion Areas, Proposed Treatments

Major Issue Category	Resource Areas	Treatment Specification Numbers
Human Health and Safety	Air Quality, Soil, Watershed/Hydrology, Recreation, Range	N/A
Soil and Water Stabilization	Air Quality, Soil, Watershed/Hydrology, Vegetation, Wildlife (aquatic), Range	2,3,8
Special Status Species	Wildlife, Fisheries, Migratory Birds, Watershed/Hydrology, Vegetation	3,4, 7, 8,
Cultural Resources	Cultural Resources	8,9
Invasive Species and Vegetation Management	Vegetation, Soil, Wildlife, Fisheries, Range, Visual Resource Quality	3,4,5,6,7,10

CHAPTER 2.0 – Proposed Action and Alternative

A. ALTERNATIVE I – NO ACTION

Under the NEPA required alternative of No Action, the BLM would choose not to implement the proposed treatments in the Emergency Stabilization and Rehabilitation Plans. All natural resources would be left to the process of natural rehabilitation.

B. ALTERNATIVE II – IMPLEMENTATION OF TREATMENT SPECIFICATIONS (PROPOSED ACTION)

This alternative would allow the BLM to proceed with implementation of specifications to mitigate the effects of the Basco Fire. Each treatment is discussed in detail in the Emergency Stabilization and Rehabilitation Plans. The proposed treatment specifications include:

Drill Seeding
Drill seed approximately 1,147 acres. Range sites within this fire have been analyzed and prioritized for treatment to prevent site degradation, maintain ecological stability, and prevent the spread of non-native, invasive weeds on sites that are suitable for ground seeding methods. Seeding would utilize species that are adapted to the sites. Seeding would help quickly establish vegetation that will stabilize soils, reduce erosion, improve soil infiltration of moisture, and provide competition for invasive non-native species and replace organic litter that was consumed by fire. It is expected that perennial native and non-native grasses, shrubs and forbs will establish within the burned area during the first growing season. Seeding would be completed using a rangeland drill ahead of or concurrent with fall or winter moisture. Literature, research, and personal knowledge of team members has shown success with this timing and application method. It is expected that vegetation establishment would be successful on all sites although the presence or absence of timely moisture could be a limiting factor. See Vegetation Treatments - Seeding Map, Appendix IV for proposed ES Plan treatment locations.

Aerial Seeding
Range sites within this fire have been analyzed and prioritized for treatment to prevent site degradation, maintain ecological stability, and prevent the spread of non-native, invasive weeds on sites that cannot be seeded by ground seeding methods. The estimated 1,543 acres of seeding would utilize species that are adapted to the sites. Seeding would help quickly establish vegetation that will stabilize soils, reduce erosion, improve soil infiltration of moisture, and provide competition for invasive non-native species and replace organic litter that was consumed by fire. Seed would be applied by rotor aircraft ahead of or concurrent with fall or winter moisture. Literature, research, and personal knowledge of team members has shown success with this timing and application method. It is expected that vegetation establishment would be successful on all sites although the presence or absence of timely moisture could be a limiting factor. See Vegetation Treatments - Seeding Map, Appendix IV for proposed locations.

Aerial Wildlife Habitat Broadcast Seeding
As part of the Rehabilitation Plan, broadcast primarily Wyoming and basin big sagebrush, gray low sagebrush, Western yarrow and native grass seed on approximately 6,750 acres with different seed mixtures based on ecological site potentials. Note that seed availability is unknown to date with any future requests for fresh seed collected during Fall 2006, approximately 450,000 acres of primarily public lands burned on the Elko District in 2006 as of August 16, 2006. Treatments would be completed aerially such as with use of a helicopter with seed broadcast bucket. Treatments would be prioritized in the vicinity of affected sage grouse leks (breeding display sites) and portions of associated habitat, and mule deer intermediate range, crucial winter range and migration corridors. Seeding in swaths (e.g., seed application on 80-foot swath, leave 160-foot swath and apply again) that allow for plant establishment and future seed sources would be prioritized on any "large" areas that burned completely. Selective "spot seeding" would also be considered due to the mosaic of vegetation types affected and to avoid intact unburned areas to where specific sagebrush species would be seeded considering site potential.

Other seed mixtures shown in this subsection would allow for additional rehabilitation of wildlife habitat as well as allow watershed protection and reduce erosion potential. The consideration of acreage seeded includes private lands and the estimated unburned areas within the perimeter. The seeding would provide cover and forage for at least 250 wildlife species that inhabit sagebrush habitats and interspersed riparian/meadow habitat including sage grouse and mule deer (both Resource Management Plan-featured species), migratory birds and Special Status Species. It would also provide vegetation needed for ecological site dynamics.

Antelope Bitterbrush Seeding/Seedling Planting
As part of the Rehabilitation Plan, in the event that bitterbrush recruitment from seed or young to mature age class plant re-sprouting is not observed through monitoring by Spring 2008, all or portions of at least 500 acres will be considered for seeding or seedling plantings. Considerations include, but are not limited to, stands observed during field tours that provide cover for Special Status Species that were otherwise burned completely. These areas are generally located at mid to upper elevations on the Independence Range and primarily characterized by the Loamy 10-12" and Loamy 12-16" Precipitation Zone Ecological Sites. Methods considered for establishing bitterbrush include, but are not limited to, hand-seeding, mechanical (e.g. drill-seeding or Hansen Seed Dribbler) seeding, and planting and protection of bare root stock or container stock. Seeding will be considered at equivalent of 3.0 Pure Live Seed pounds/acre equivalent.

Quaking Aspen Protection and Management
Approximately two miles of free-standing steel rail fence, or three-strand barbed wire fence with bottom wire smooth, would be used to protect approximately 50 acres of fire-affected quaking aspen stands, as deemed necessary and as feasible. Post-fire livestock management would be implemented in a manner to help allow for sapling recruitment needed for recovery of stands.

Noxious Weed Treatment
This treatment would provide for control of known non-native weed infestations within the Basco Fire perimeter prior to seed-set and maturation. Control of these Nevada Listed noxious weeds needs to be conducted or they will spread into non-infested areas of the burn. Integrated pest management techniques (herbicides, biological, mechanical, and cultural control methods) would be used as appropriate to prevent the spread and establishment of noxious weeds within the fire area. No cost was developed for possible hand grubbing of weeds since so few weeds would be treated in this manner, and grubbing would occur in association with spraying. See Vegetation Treatments – Weeds Map, Appendix IV for proposed locations.

Noxious Weed Detection
Conduct noxious weed detection surveys for possible invasion of noxious weeds on roads, hand lines, dozer lines, and other disturbed areas within the Basco Fire perimeter. Monitor existing noxious weed infestations within the burned area to determine if expansion is occurring into non-infested areas. An inventory would be conducted for noxious weeds near existing locations and in areas that have a high

probability for invasion within the burned area. See Vegetation Treatments - Weeds Map, Appendix IV for proposed locations.

Protective Fence – Permanent
Reconstruct protective fences on approximately 14 miles burned by the Basco Fire. Burned fence materials, including wire, would be removed. Fences would be used to protect seeded areas or areas managed for natural recovery from livestock grazing. Construct approximately 6 miles of new fence and remove approximately 1 mile for extraneous fence damaged by fire for t he purpose of providing additional protection for drill seedings and for Lahontan Cutthroat Trout (LCT) recovery habitat on Susie Creek. See Range Improvement Treatments Map, Appendix IV for proposed locations.

Cultural Protection – Post Fire Assessment
This treatment would entail assessment of known National Register (NR) or potentially eligible prehistoric and historic archaeological sites for post-fire damage and potential risk from erosion, looting or vandalism. This treatment may also provide for emergency BAER actions on those easily accessible sites that are deemed to be highly sensitive to looting.

Cultural Resources Treatment Clearance
Pursuant to Section 106 of the National Historic Preservation Act, the lead Federal agency needs to take historic properties into account prior to implementing Federal Undertakings. Cultural resource inventories would be conducted on areas proposed for ground disturbing stabilization treatment (fence construction, drill seeding, etc). The maps illustrating where proposed actions are located are in Appendix IV. These inventories would be conducted prior to implementation of the proposed treatments in order to identify and avoid cultural resources determined by the BLM to be eligible for the National Register.

Inventories would be in accordance with the State Protocol Agreement between the Nevada BLM and the Nevada State Historic Preservation Office (SHPO). All cultural resources located or re-located would be recorded on the Nevada IMACS short form and plotted on maps. Cultural resources that are determined to be eligible for the National Register would be flagged for avoidance prior to stabilization activities. Flagging would be removed as soon as possible after stabilization treatments to minimize the potential for looting and vandalism.

Monitoring Effectiveness
Areas within the Basco Fire burned from low soil burn severity to high, with considerable unburned islands creating a mosaic effect throughout the burned area. The BAER Team vegetation and watershed groups, in consultation with the range and natural resource staff of the Elko Field Office, have recommended vegetation treatments to stabilize soils, prevent the invasion of non-native annual plant species, and treat known locations of noxious weeds. This specification proposes re-seeding monitoring for three years following treatment (2007-2009) to ascertain success of re-vegetation efforts. Utilize “Freqdens” Techniques or similar methods established for seeded areas. Use production/site composition methods and/or density for areas managed for natural release. Consult with APHIS representatives on potential impacts to seedings from Mormon cricket epidemics. Monitor relic aspen stands and stream and riparian habitats for post fire regeneration and impacts from grazing and wildlife. A resource specialist from the Field Office would provide program oversight for this specification.

Establish monitoring transects within all seed areas and within areas managed for natural release in each plant association type reseeded in 2007. Final site selections would be made by a BLM resource specialist. Site selection includes stratification of areas based on range sites, slope, soils, aspect, treatments (including seeding methods, seed mixes, and natural release), allotments, etc. This stratification would occur primarily during the first year.

Grazing Closure
Livestock grazing would be removed from the burned area in order to allow the burned and seeded vegetation to successfully establish. The closure would occur until establishment objectives Fire Closure Agreement/Decision are met, in order to provide an adequate amount of time to allow the seeded vegetation to establish and plant species not damaged by the wildfire to respond to natural revegetation.

Post-fire grazing management, including the period of time needed for closure, would be determined based on coordination, cooperation, and consultation with the interested public, monitoring, and achievement of site specific resource objectives.

CHAPTER 3.0 - Affected Environment

This chapter describes environmental and cultural components potentially affected by the implementation of this ES Plan. More in depth and detailed information of these components can be found in the Resource Assessments (Appendix I) of this ES Plan. The affected environment described in this document would be the same for the BAR Plan.

The following critical elements of the human environment are not present or are not affected by the proposed action or alternative in this Environmental Assessment:

- Areas of Critical Environmental Concern/Special Management Areas
- Environmental Justice
- Farmlands (Prime or Unique)
- Socio-economics
- Wastes (Solid or Hazardous)
- Water Quality (Ground Water)
- Wild and Scenic Rivers
- Wild Horse and Burro Management
- Wilderness

Critical elements and resources brought forward for analysis:

A. SOILS

Soils vary greatly depending on landform, slope position, and parent material. They are described in detail in the Soil Survey of Elko County, Nevada, Central Part and the Soil Survey of Tuscarora Mountain Area, Nevada, Parts of Elko, Eureka, and Lander Counties. Only a very generalized and simplified summary is included here. The eastern portion of the fire is characterized by rolling hills and remnant alluvial fans formed from tuffaceous sedimentary rocks and some local volcanic ash. Soils tend to be moderately deep and deep in the southeast and shallower with duripans in the northeast. Dominant soils include the Stampede, Bilbo, Donna, Tufo, and Yuko series. Water erosion hazard is considered moderate to low. There is a north-south trending belt of soils on the easternmost edge of the fire parallel to Highway 225 that have very high potential for wind erosion. In moderately burned areas, increases in water repellency may further exacerbate wind erosion potential. The western portion of the fire consists of more mountainous terrain, formed primarily from Paleozoic sedimentary and volcanic rocks and welded ash flow tuffs. Soils vary from shallow soils with duripans to deep soils on lower slopes forming in tuffs and colluvium, surface textures are generally very cobbly and gravelly. Dominant soils mapped include Cleavage, Sumine, Loncan, and Chen series.
Wind erosion hazard is considered moderate to slight and water erosion hazard is moderate to very severe. Wetland soils occur in some of the valley bottoms where water tables are high, these tend to be deep, very high in organic matter and fine textured, they may also be susceptible to wind erosion.

Only minor amounts of soil biological crusts were observed in the unburned areas. They were rolling crust dominated by early successional communities of cyanobacteria and mosses, found in protected areas under sagebrush plants. Lichen crusts were not observed. Surface biological crust cover was generally less than 5%. Physical crusting was common especially in the interstices between shrubs in the less rocky areas. In areas where vegetation canopy was burned, biological crusts were also mostly consumed, and/or covered with ash. Biological crusts in unburned islands and areas with low vegetation mortality appear to be similar to areas outside of the fire. Unburned islands were present throughout the burned area and should serve as propagating source areas for the recovery of cyanobacteria and mosses, aiding in soil stabilization.

B. AIR QUALITY

Air quality in and around the Basco Fire is generally considered good. It is designated as unclassified for all criteria pollutants, and thus is considered to be in attainment with the National Ambient Air Quality Standards (NAAQS). None of the areas being proposed for emergency stabilization and/or rehabilitation fall within a non-attainment area. The nearest Class I, Prevention of Significant Deterioration Area, is the Jarbidge Wilderness Area, approximately 40 miles to the northeast.

There are localized occurrences of dust caused by high winds, vehicular traffic, and construction activities. Smoke emissions from local fires sometimes cause short term reduction in visibility and fire fighting activities using mechanized equipment can produce dust. Based on soil information there are soils that may be potential PM-10 source areas in the eastern portion of the burned area parallel to Highway 225.

C. WATER QUALITY

Ground water quality is not affected by the proposed action. Therefore it will not be addressed in this document. Surface water quality and wetlands/riparian zones are potentially affected and will be addressed.

Surface

The major drainage within the fire area is Susie Creek. Tributaries to Susie Creek within the fire include: Mason Creek, Cold Creek, Singletree Creek, Blue Basin Creek and Swales Creek. Chicken Creek and Lone Mountain Creek drain the northwest area of the fire. Lahontan Cutthroat Trout occupy a section of Lone Mountain Creek just downstream of the fire. Additionally, there are several seeps and springs within the fire area. Highest discharge for these springs occurs during the wet, late winter and spring months with lowest discharge during the summer months. The springs are small, generally flowing less than five gallons per minute.

The Humboldt River downstream of the Basco Fire is listed on the 303(d) impaired waters list for iron (total), total phosphorus, turbidity, and zinc (dissolved). Maggie Creek, downstream on the west side of the Basco Fire is also listed on the 303(d) list for total phosphorus.

Wetlands/Riparian Zones/Floodplains

Wetlands and riparian zones occur throughout the area affected by the fire. These areas are primarily associated with perennial streams, springs, seeps and small meadows. Intermittent or partially intermittent drainages support scattered riparian plant communities (refer to vegetation section below). Generally, riparian zones in good or improving condition did not burn (although these areas are limited in extent). The majority of riparian areas in the fire perimeter were in poor condition and adjacent floodplains and terraces were burned. Consequently, stream channels could receive little protection from anticipated ash and sediment loading.

D. VEGETATION

The vegetation communities within the Basco Fire contain significant physical and biological diversity that provide valuable wildlife habitat, watershed protection, and livestock forage. Past land management practices have shaped the plant community composition in the northeastern portion of Nevada.

Plant Communities

The following vegetation communities occur within an adjacent to the fire perimeter:

1. Mixed Salt Desert Scrub (*Atriplex, Chrysothamnus Shrub* Communities)

A. Intermountain Basins Greasewood Flat

This type is generally dominated by Black Greasewood (*Sarcobatus vermiculatis*). It is considered distinct from salt desert scrub communities, but often occurs on saline soils and around playas. Salt desert scrub species often occur with greasewood, but greasewood never reaches co-

dominance in salt desert scrub designated types.

B. Intermountain Basins Mixed Semi-Desert Shrub Steppe

This category is included here for some types that are adjacent to salt desert scrub types. It has a strong herbaceous component (>25%) with scattered shrubs such as *Atriplex spp.* and *Chrysothamnus spp*. Common grasses include Indian ricegrass (*Achnatherum hymenoides*), Saltgrass (*Distichlis spicata*), and Needle-and-Thread (*Hesperostipa comata*).

2. Sagebrush Dominated Communities

Those areas dominated by Sagebrush (*Artemesia tridentata*) are included in this group. A variety of perennial grasses occur within sagebrush dominated sites. This vegetation type occurs both within basins and in mountainous areas.

A. Intermountain Basins Big Sagebrush Shrubland

This type is dominated by Basin Big Sagebrush (*Artemesia tridentata var. tridentata*) or Wyoming Big Sagebrush (*Artemesia tridentata var. wyomingensis*). Other shrubs that are present but not dominant include Rubber Rabbitbrush (*Ericameria nauseosa*), Antelope Bitterbrush (*Purshia tridentata*), Black Greasewood (*Sarcobatus vermiculatis)* and *Atriplex spp.* Perennial herbaceous species make up less than 25% cover. Grass Species include Indian ricegrass (*Achnatherum hymenoides*), Idaho Fescue (*Festuca idahoensis*), Needle-and-Thread (*Hesperostipa comata*), Great Basin Wild Rye (*Leymus cinereus*), bluebunch wheatgrass (Pseudoroegneria spicata), Western wheatgrass (*Pascopyrum smithii*), and Sanberg Bluegrass (*Poa secunda*).

B. Great Basin Xeric Sagebrush Shrubland

These communities occur on dry sites often with rocky, shallow soils typical of alluvial fans and bajadas. Dwarf shrubs are common on these sites. At lower elevations they are often dominated by Black Sagebrush (*Artemesia nova*) and on higher sites and exposed ridges by Low Sagebrush (*Artemesia arbuscula*). Other common shrubs include Wyoming Big Sagebrush (*A. tridentata var. wyomingensis*), Black Greasewood (*Sarcobatus vermiculatis*), and Shadscale (*Atriplex confertifolia*). Perennial grasses are likely sparse but would include Indian ricegrass (*Achnatherum hymenoides*), Squirreltail (*Elymus elymoides*), and Bluegrass (*Poa secunda*).

3. Herbaceous communities

A. Intermountain Basins Semi-Desert Grassland

This type is dominated by native perennial grasses including Indian ricegrass (*Achnatherum hymenoides,* bluebunch wheatgrass (Pseudoroegneria spicata), and Needle-and-Thread (*Hesperostipa comata*).

B. Invasive Annual Grassland

This type is dominated by exotic annual grasses such as Cheatgrass (*Bromus tectorum*).

C. Introduced Perennial Grassland

This type consists of crested wheatgrass, a perennial grass of non-native origin.

4. Riparian/Wetland

This group consists of vegetation associated with perennial or ephemeral available surface water. Moisture may be provided by flowing water associated with rivers and streams (riparian) or where water flows very slowly such as marshes. Dominant vegetation can be woodlands, shrublands, or herbaceous plants.

A. Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland

This vegetation type is found within drainages in mountain ranges of the Great Basin. It is quite variable depending upon elevation, stream gradient, floodplain width, and flooding regime. A mosaic of different types may be present. Tree species may dominate, and shrubs and

herbaceous species are generally abundant. Aspen (*Populus tremuloides*) may be present as well as broadleaf deciduous, namely Willow (*Salix spp*.), Cottonwood (*Populus angustifolia*, *P. balsamifera*, and *P. fremontii),* and Water Birch (*Betula occidentalis*). Common shrub species include Willow (*Salix spp*.), Dogwood (*Cornus sericea*), and Silver Sagebrush (*Artemesia cana*). The herbaceous component generally consists of graminoids including Sedge (*Carex spp*.), Rush (*Juncus spp.),* Tufted Hairgrass (*Deschampsia cespitosa*), and Slender Wheatgrass (*Elymus trachycaulus*).

5. Aspen Forest Community

The major important forest species is Aspen (*Populus tremuloides*) and may contain herbaceous species or shrubs such as Snowberry (*Symphoricarpos spp*.) or Serviceberry (*Amelanchier utahensis)*

6. Non-Vegetated

These areas within the fire perimeter include rock out croppings, rock faces and barren soil.

Invasive Species and Noxious Weeds

Many non-native invasive plants and noxious weeds are widespread throughout this sub-region of the state. The Basco Fire has set back the successional processes of many mid to late seral plant communities and provided a window of opportunity for the further encroachment of non-native invasive plants, such as cheatgrass (*Bromus tectorum*). Cheatgrass has steadily increased its hold on western rangelands over the past several decades. A highly aggressive competitor, this annual species may occupy many more thousands of acres of Nevada rangelands unless native communities are maintained through protective vegetative treatments. Cheatgrass dominated communities have shallow root systems that increase erosion potential and decrease watershed health and function; provide low nutritional value for wildlife and domestic livestock; negatively impact critical habitat; and create areas of fine flashy fuels that increase fire frequencies. State listed noxious weeds or invasive plants of concern within the fire area include Canada thistle, musk thistle, hoary cress, and Russian knapweed, all of which are known to increase following disturbance such as fire.

E. WILDLIFE

Wildlife (Aquatic)

A number of seeps and springs as well as small or intermittent drainages also occur within or adjacent to the burn perimeter. Chicken Creek supports Lahontan speckled dace (*Rhinichthys osculus*) and drains into Maggie Creek (an important LCT stream). Lahontan speckled dace occur in Susie Creek and its tributaries Swales and Blue Basin Creeks. Susie Creek also supports Mountain or Tahoe suckers (*Catostomus* spp.) and Lahontan redside shiners *(Richardsonius balteatus)*.

Wildlife (Terrestrial)

The proposed stabilization and rehabilitation actions are located on areas characterized by the following vegetation types: basin, Wyoming, and mountain big sagebrush; low, big sagebrush-bitterbrush, and mountain shrub (”montane shrub”). Some areas have a mottling of these vegetation types interspersed with loamy bottom ephemeral drainages, meadows, aspen and riparian habitat. Isolated, scattered to more uniform stands of serviceberry plants were also affected as part of collective mountain shrub areas. Antelope bitterbrush is present at mid to upper elevations.

Mule Deer – (Elko RMP-featured species)

The Basco fire burned most of the Blue Basin Allotment which is crucial mule deer winter range and large portion of the east side of the Lone Mountain Allotment, which is crucial mule deer summer range. Due to limited winter range, the burned portion of the winter habitat would effect a population which utilized the Blue Basin Allotment almost exclusively. This coupled with the Susie fire to the south, impacts a large portion of crucial winter habitat. Deer herds displaced from both fires will primarily congregate within the

unburned portions. Increased animal numbers on limited habitat could result in increased mortality and habitat degradation.

Pronghorn – (Elko RMP-featured species)

The area also provides pronghorn summer range. Populations have increased substantially over the last 20 years. This is likely a result of natural expansions back into suitable habitat, population increases after pre-1980s winter event(s) that resulted in high mortality, fence modifications, and a collective number of wildfires that have created more preferred "open" habitat. However, sagebrush is a habitat component needed for forage and cover diversity during the summer period on the affected area.

Other Game and Non-Game Wildlife Species

The affected portion of the Independence Range provides habitat for a small, but expanding, population of elk (est. less than 50). Collectively, more than 250 wildlife species could utilize suitable habitat on the affected area on a seasonal or yearlong basis. Overall, there are approximately 100 bird species, 70 mammal species and several reptile and amphibian species that can be found in sagebrush habitats on the allotment with many more additional species also found in the vicinity of riparian and meadow habitats on a seasonal or yearlong basis. The area provides habitat for many of these species. Some of these species are shown for the "Lower Sagebrush/Grassland Steppe - Northeastern Nevada" in Appendix 3 while others are shown/duplicated in Nevada Partners in Flight Bird Conservation Plan (Appendix 1) per affected habitat type. For more complete lists, consult the BLM Nevada Elko District Bird, Mammal, and Reptile and Amphibian Lists available through BLM Elko Field Office.

Quaking aspen sites have the highest biodiversity of any upland forest types in the West. A limited number of aspen stands (estimated at less than 50 acres combined) were affected within the Independence Range/Upper Susie Creek area.

F. MIGRATORY BIRDS

See Wildlife Subsection above for affected vegetation types. These areas provide foraging areas and cover diversity for migratory birds.

On January 11, 2001 President Clinton signed the Migratory Bird Executive Order. Please see Appendix A for scope of this executive order and applicable species shown for affected habitat type listed above per 1999 Nevada Partners in Flight Bird Conservation Plan.

Maintaining complete, diverse sagebrush communities is integral to conservation efforts for these species. Wyoming and basin big sagebrush vegetation types generally do not naturally respond well to complete loss over thousands of acres in block burn configurations, such as large areas observed on the burn, where only relatively small intact stands still exist. Basin big sagebrush seed banks (viable residual seed dispersed last fall and winter) were likely lost in many areas as a result of the fire within the large blocks, particularly, those areas that burned with moderate intensities. Wyoming big sagebrush seed banks usually do not persist after a given summer following previous fall through spring seed dispersal in unburned areas, let alone burned areas. Mountain big sagebrush seed can potentially remain viable for several years as part of plant litter. However, it is unknown if viable mountain big sagebrush seed remains on affected areas. Many areas burned at moderate soil burn severity. Ground tours confirm that ground litter was burned on mountain big sagebrush sites. Overall, big sagebrush natural recruitment would be slow from intact stands without rehabilitation.

G. SPECIAL STATUS SPECIES

Aquatic Species

Lone Mountain Creek supports a very limited and isolated population of LCT, a federally listed threatened species, in an entrenched spring-fed channel. The fish occur in less than one mile of stream, with most of the habitat occurring in the private fenced Basco Field. A very small portion of occupied habitat occurs on BLM lands outside the fire perimeter. Lone Mountain Creek drains into Maggie Creek, an important stream for LCT. The LCT population was first documented in 2000. Anecdotal evidence suggests the

fish are still present, although channel entrenchment and high turbidity levels likely contribute to the high vulnerability of this population. No LCT were observed during the 8-3-06 fire impact assessment. Historical data also indicated the area supported Columbia spotted frogs (*Rana luteiventris)*. Current records show two confirmed locations within the Basco fire perimeter. At least one spotted frog has been documented in the watershed in 2005 (Bridget Nielsen, U. S. Fish and Wildlife Service, personal communication, 2006). The spotted frog is identified as a candidate species for listing under the Endangered Species Act (ESA).

Terrestrial Species
The area provides habitat for terrestrial wildlife species designated as Special Status Species including 24 species designated as Nevada BLM Sensitive Species. Please see Appendix 2 for a list of these species. Nevada BLM policy is to provide Nevada BLM Sensitive Species with the same level of protection as is provided for candidate species in BLM Manual 6840.06C. The BLM's Special Status Species Policy (6840) states that, "…the BLM shall implement management plans that conserve candidate species and their habitats and shall ensure that actions authorized, funded, or carried out by BLM do not contribute to the need for the species to become listed" (section 6840.06C). The policy also states that …"the protection provided by the policy for candidate species shall be used as the minimum level of protection for BLM sensitive species" (section 6840.06E).

Greater Sage Grouse - Resource Management Plan (RMP)-featured species
Greater Sage grouse were designated as a BLM Sensitive Species by the Nevada BLM State Director in 1997. Concerns about greater sage grouse populations and habitat resulted in the Nevada State Governor's Final 2001 Nevada Sage Grouse Conservation Strategy (State Strategy). The Northeastern Nevada Stewardship Group Inc. (NNSG) was tasked with completing the June 2004 Elko County Sagebrush Ecosystem Conservation Strategy (Elko Strategy) as part of this overall State Strategy. The burned area is within the 1,731,231-acre North Fork Sage Grouse Population Management Unit (PMU) in Northeastern Nevada considered under the Elko Strategy by the NNSG. The PMU has one of the highest sage grouse populations in Nevada and also is an area with one of the most contiguous collective habitat areas in Nevada. Regarding habitat on the PMU, the Elko Strategy mentions that the area has, "the potential for large scale loss to fire." These grouse populations are associated with a high density of leks (breeding display sites) and habitat needed to sustain populations on a yearlong basis. This includes lek-associated nesting and early (upland) brood-rearing habitat, summer and late (meadow/riparian areas) brood-rearing habitat, and fall/winter habitat. It is estimated that vegetation on seven leks were directly burned within the fire perimeter. Several more leks were in very close proximity (within 100 yards to less than 0.5-mile) to the burn perimeter. All portions of the burn areas collectively provided sage grouse habitat.

One primary concern for sage grouse are wildland fires that result in the complete loss of habitat over thousands of acres. Rehabilitation of sage grouse habitat and the prevention of invasion by fire prone annual weeds is a wildlife management priority of both NDOW and BLM.

The Nevada Steering Committee for the Intermountain West Joint Venture (IWJV) has designated sagebrush habitats as "Priority A" (highest rating) for management due, in part, to potential high species diversity, the number of species of concern and the potential to be negatively impacted by wildfires. In Nevada, the IWJV is a group comprised of State and Federal agencies, scientists, non-profit organizations, and individuals.

The 1999 Nevada Partners In Flight (PIF) has recognized the importance of intact sagebrush habitats for sage grouse and other avian Special Status Species

Yellow billed Cuckoo – Yellow billed Cuckoo have the potential to inhabit riparian areas such as the ones present within the burn perimeter. However, no documented sightings have occurred in this area.

Pygmy rabbits – Pygmy rabbits are a BLM Sensitive Species petitioned for listing as threatened or endangered under the Endangered Species Act of 1973. On May 20, 2005, the U.S. Fish and Wildlife Service announced a 90-Day Finding in the Federal Register indicating that, "… the petition does not provide substantial information indicating that listing the pygmy rabbit may be warranted.

The Finding does not downplay the need to conserve, enhance or protect pygmy rabbit habitat. They have been documented on the affected burn area.

Pygmy rabbits are found in various vegetation types that include big sagebrush that are suitable for creating their burrow system. Observations in Nevada have been made over broad areas including those characterized by the mountain, basin and Wyoming big sagebrush vegetation types and the big sagebrush-bitterbrush vegetation type. These vegetation types were affected by the fire. Relative to the affected area, the highest likelihood of occurrence would be on sites that support big sagebrush that may be associated with meadows or former meadows or areas directly adjoining these areas.

H. RECREATION

No developed recreation sites occur within the burned areas. Opportunities for dispersed, primitive and unconfined forms of recreation within areas affected by the fires are outstanding. Primary forms of recreation in the burned area include hunting, heritage tourism, hiking and off-highway vehicle touring.

Casual Off-Highway Vehicle use occurs throughout the fire. This Off-Highway Vehicle use occurs on a network of existing designated and undesignated routes, tracks, trails and washes in addition to some cross country travel. Off-Highway Vehicle use is associated with a variety of other recreation uses including hunting, heritage tourism, and sight seeing. Big game hunting in the fall is the primary hunting use within the burned area.

I. CULTURAL RESOURCES

Archaeological resources that may be affected by proposed emergency stabilization and rehabilitation of the Basco Fire in the Elko District span at least the past 11,000 years. Sites are comprised of flaked- and ground-stone artifacts, along with limited amounts of ceramics and rock art. Habitation areas occur in open camps and rock shelters. Early hunters constructed and utilized blinds.

For much of prehistory humans lived as mobile hunter-gatherers. A part of humankind's foraging prehistory is vividly illustrated and well-preserved in northeastern Nevada. The modern Western Shoshone continue to reside in, utilize resources, and maintain knowledge of the area, including sacred areas and important landmarks.

While Euro-American fur trappers passed through this area in the 1820's, the Historic Period really begins in the 1840's. By this time emigrant parties were traveling the California and other trails to the West Coast. Some stayed and developed way stations to support the wagon trains. In 1869 the Central Pacific Railroad crossed the area and several towns (e.g., Elko and Carlin) developed as supply centers. Starting in 1867, when gold was first discovered in the area, mining has been part of the region's economy. Ranching also began around the same time as mining and has also continued as a major industry.

The Elko District is known to contain a large number of prehistoric and historic sites unevenly distributed across the landscape. Sites may be damaged or destroyed by fire as well as by emergency stabilization and rehabilitation activities. Few cultural resources inventories have been previously conducted within the Basco Fire burn zone. However, results of numerous inventories completed to the south and west of the burn, combined with the presence of several perennial creeks and springs, suggest that a relatively high site density will be encountered in the treatment areas.

J. NATIVE AMERICAN CONSULTATION

Federal legislation and executive orders dictate that federal agencies must consider the repercussion of their actions when Native American traditional, cultural, and spiritual practices and associated sites are known to exist. Therefore, the BLM must make efforts to identify locations having traditional cultural or religious values to Native Americans and insure that Emergency Stabilization/Rehabilitation projects do

not unduly or unnecessarily burden the pursuit of traditional religion or life ways by inadvertently damaging important locations or hinder access to them.

The Western Shoshone and possibly the Northern Paiute originally occupied those locations near and within the Basco Fire Burn. Across northern Nevada, resources, sites and social practices of importance include, but are not limited to: Existing antelope traps; certain mountain tops used for prayer; medicinal and edible plant gathering locations; prehistoric and historic village sites and gravesites; sites associated with creation stories; hot and cold springs; material used for basketry and cradle board making; locations of stone tools such as points and grinding stones (mono and matate); chert and obsidian quarries; hunting sites; sweat lodge locations; locations of pine nut ceremonies, traditional gathering, and camping; boulders used for offerings and medicine gathering; tribally identified Traditional Cultural Properties (TCP's); TCP's found eligible to the National Register of Historic Places; rock shelters; "rock art" locations; lands that are near, within, or bordering current reservation boundaries; water sources (hot and cold springs, etc) in general that appear to be considered the "life blood of the Earth and all who dwell upon it."

For this specific location, possibly due to the remoteness of the area, there have been few cultural inventories completed and opportunities to consult with the local tribes and bands, concerning cultural and spiritual properties, have been limited. Records or past documentation of spiritual/traditional use areas within the Basco Fire boundary are limited. Therefore, it is strongly suggested that an initiation of consultation with the local tribes and bands be implemented in order to acquire an updated and accurate location of any existing culturally important areas, on a project specific basis.

K. VISUAL RESOURCE QUALITY

The Visual Resource Management (VRM) inventory process considers the scenic value of the landscape, viewer sensitivity to the scenery and distance of the viewer to the subject landscape. These management classes identify various permissible levels of landscape alteration, while protecting the overall visual quality of the region. Management classes are divided into four levels (Class I, II, III and IV), with Class I designated as being most protective of visual resources. The Basco Fire contains both Class II and Class III areas, described below.

The Class II objective is to retain existing landscape character. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract a casual observer's attention. Any changes must repeat the basic elements of line, form, color and texture found in the predominant natural features of the characteristic landscape. There are 23,223 acres within the Basco fire boundary designated as Class II.

The Class III VRM objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the landscape. Changes caused by management activities may be evident and begin to attract attention, but these changes should remain subordinate to the existing landscape. Approximately 23,960 acres of the fire is located in Class III.

L. RANGE

Consultation with staff from BLM Elko Field Office was conducted on range management issues. The following table lists the allotments, animal unit months (AUMs), and fire impacts to the resources. Rangeland management staff provided the data for permittees and permitted AUMS impacted. Many of the permitted AUMs are potentially impacted due to the extent of the burns and existing rangeland projects, i.e., fencing and water sources. A meeting was held on August 11, 2006 to invite permittees to express concerns and listen to assessments by the BAER team and programs for private landowners administered by the Natural Resource Conservation Service (NRCS).

Table 2. Basco Fire Range Allotments

Allotment	Permittee	Approximate Acres Burned by Allotment[2]	% of Total Allotment Acres Burned	Permitted AUMs[1]
Lone Mountain	Hooper / Wolf	19,574	40%	7,201
Hadley	Maggie Creek - Jon Griggs	• 3,145	6%[3]	4,070
Blue Basin	Heguy / Lambert	21,271	45%	5,791
Fox Springs	Van Norman Ranches Inc.	130	<1%	624

[1]Total AUMs for the allotment; does not indicate AUMs affected by the fire.
[2] Rough estimates; will be analyzed through GIS but separately from this plan due to time and resource constraints.
[3]The majority of the Hadley South Pasture burned in the recent Susie Fire

CHAPTER 4.0 – Environmental Consequences

The DOI BAER Team has reviewed appropriate physical and biological resources in the proposed project areas. As part of the design process and environmental evaluation, we considered whether the impacts on physical and biological resources would have subsequent economic and social effects.

The following critical elements of the environment are either not present or not impacted by the proposed action: Farmlands (prime or unique), Waste, Hazardous or solid, Wild and Scenic River, Environmental Justice and Noxious Weeds.

The following discussion analyzes the potential impacts on the twelve (12) major issues: 1.) Soils, 2.) Air Quality, 3.) Watershed/Hydrology, 4.) Vegetation, 5.) Wildlife, 6.) Migratory Birds, 7.) Special Status Species, 8.) Recreation, 9.) Cultural Resources, 10) Native American Consultation, 11.) Visual Resource Quality and 12.) Range Management.

A. SOILS

Alternative I - No Action

There may be adverse, moderate short-term effect on soils with moderate to high soil burn severity from increased erosion. Moderate amounts of erosion are likely on steeper slopes that burned at moderate to high severity, although this is only a small amount of the total burn area. Soils that are highly susceptible to wind erosion in the eastern portion of the fire will likely experience topsoil loss and be a source of PM-10, which could create visibility and safety issues for motorists along Highway 225.

Alternative II - Proposed Alternative

Soil and watershed stabilization following wildland fire would be enhanced by successful reestablishment of native or desired plant communities, where treatments are implemented and where natural revegetation is adequate to protect soil surfaces. Implementation of the treatments would speed up the revegetation process through seeding and rest from grazing for a minimum of two growing seasons. Successful revegetation would facilitate soil stabilization of exposed burned soils. Revegetation efforts would provide indirect beneficial effects on soils by providing cover and root structure from seedings which would minimize soil loss through wind and water erosion.

Some minor soil compaction may occur along fences as a result of vehicular traffic involved in fence construction and fence repair activities to facilitate grazing closures. In addition, routine fence maintenance could also impact soils through compaction. Site preparation treatments involving soil disturbance such as drilling could also expose soils to short-term wind erosion prior to successful seedling establishment. In addition, herbicide applications may produce short-term adverse impacts to microorganism populations in the soil immediately after application. However,

these impacts are anticipated to be short-lived, while the benefits to soils from establishment of native or desired plant communities would be long-term.

Based on only a few field observations the biological crust component of the dominant sagebrush communities appeared to be relatively low, and there is greater than 75% of the fire area that was either unburned or burned at low intensity. These areas will serve as inoculation sources for re-establishment of crustal organisms. However there are several relatively large areas that experienced moderate burn severity where recovery is expected to be slow. Where these occur in high wind erosion areas recovery is expected to be even slower due to burial by blowing dust and topsoil.

Due to the immediate threat to human life, health and safety, warning signs were immediately posted on the highway to warn motorists of potential dust and visibility hazards.

B. AIR QUALITY

Alternative I - No Action

Since much of the protective vegetative cover has been denuded there may be adverse effects to air quality and visibility due to increased particulate matter (PM_{10}) from wind-blown dust and ash. Localized blowing ash and soil would occur until the burned soil surface receives enough soil moisture to prevent it from blowing, a physical soil crust forms, or vegetation is reestablished. There would not be any additional soil disturbance from fire rehabilitation treatments, so no additional fugitive dust emissions would occur. However, without any seedings or livestock closure, the burned area is more likely to revegetate with undesirable species which won't stabilize the soil as well as seeded species, and would subject the area to further blowing dust.

Alternative II - Proposed Alternative

Localized blowing ash and soil would occur until the burned soil surface receives enough soil moisture to prevent it from blowing, a physical soil crust forms, or vegetation is reestablished. Treatments which disturb the soil surface would generate dust during implementation. Livestock closure and noxious weed treatments would speed up the revegetation of desirable species, capable of minimizing fugitive dust emissions. Based on previous experience within the Elko District area, regarding highway safety issues related to dust and visibility, hazard signs were immediately posted along the Highway to warn motorists of hazardous conditions.

C. WATER QUALITY

Alternative I - No Action

Surface Water
The no action alternative could negatively impact surface water quality. Without rest from livestock grazing and the proposed seedings sediment delivery to stream channels is expected to increase above natural background conditions.

Wetlands/Riparian Zones/Floodplains
The no action alternative could negatively impact wetlands and riparian zones. Cheatgrass and other invasive weeds would likely invade wetland and riparian areas, replacing native vegetation and resulting in more easily erodible stream channel banks and floodplains. Fire frequency could also increase in these areas as a result of the spread of cheatgrass.

Alternative II - Proposed Action

Surface
The proposed revegetation and rest from livestock grazing would directly benefit water quality in streams or reservoirs by reducing runoff and sediment input by minimizing soil loss. Proposed herbicide treatments have the potential to impact surface water quality if chemicals leach through

soils or are applied near streams. Adherence to standard operating procedures as outlined in the Programmatic Environmental Assessment of Integrated Weed Management on BLM Lands, BLM/EK/PL-98-008 would minimize any potential for water quality impacts from chemical treatments.

Water quality in the Humboldt River and Maggie Creek downstream of the Basco Fire would not be further degraded with the implementation of the proposed treatments. Total phosphorus and turbidity are pollutants of concern that can be affected by increases in sediment. Implementation of the proposed treatments would reduce the amount of sediment delivered to stream channels and transported downstream to the Humboldt River and Maggie Creek.

Wetlands/Riparian Zones/Floodplains
The proposed treatments in wetland or riparian areas would primarily consist of native plant seedings and grazing closures. The treatments would be designed to increase the rate at which native riparian vegetation is restored in burned riparian or wetland areas, and to rest these areas from grazing. Prompt revegetation of these areas would provide beneficial habitat and flood control qualities.

D. VEGETATION

Alternative I - No Action

The no action alternative could be quite variable to the vegetation resources of the project area. Short term recovery would not occur without seeding the moderate to high burn severity acres of the sagebrush dominated communities and semi-desert grasslands.

In sites that are in early or mid–seral condition, with a few perennial grasses, the chances are high that the burned area could become dominated by cheatgrass. In light of increased fire activity and the competitive nature of cheatgrass, the shrub component would likely be slow to reestablish, if it were to recover at all. Once a site becomes dominated by cheatgrass, it would be difficult and expensive to alter the vegetation to a perennial grass dominated community.

Alternative II - Proposed Action

The proposed action includes ground and aerial seeding of native grasses and forbs and shrubs in areas of moderate to high burn severity or high vegetation mortality. To protect the seeding investment, protective fencing is also proposed. The proposed action would also include the control and detection of non-native plants with approved herbicides. The establishment of native perennial grasses and forbs would benefit the understory, out compete non-native annuals and create a more fire adapted ecosystem that is resilient to disturbance and thereby improve the Fire Regime Condition Class.

E. WILDLIFE

Alternative I - No Action

There may be positive short-term benefits due to potential increasing herbaceous vegetation densities in these areas that may improve habitat for those avian and mammalian wildlife (e.g. Western meadowlarks, horned larks and pronghorn antelope) that seasonally seek more “open” habitat areas with either no shrub cover, or isolated to scattered shrub cover. However, this may be a negative aspect in the long-term due to shrub losses involving catastrophic fire as these same wildlife species require areas with more uniform shrub cover on a seasonal basis during their life cycles. The loss of browse species could affect the mule deer population’s survival rate, since this area contains thousands of acres of fire-affected intermediate range (spring and fall)

and crucial winter habitat.

Per the U.S Forest Service's Fire Effects Information System, affected sagebrush species such as Wyoming big sagebrush are readily killed by fire when above ground plant parts are charred by fire. Sagebrush foliage exposed to temperatures above 195 degrees Fahrenheit (90^{o}C) for longer than 30 seconds results in plant death. Loss of this live vegetation means long term loss of seed sources. Wyoming big sagebrush seed does not persist over a year with or without fire effects. Shrub composition potentially affected for the long term without rehabilitation efforts include a variety of low and big sagebrush species and antelope bitterbrush. Per ocular estimates from monitoring in Blue Basin on Blue Basin Allotment in Summer 2005 (west side of burn) and 2005 Oyster Fire (east side of burn) tour, bitterbrush was in satisfactory form class prior to the fire on these specific areas on the Independence Range. However, the potential for bitterbrush re-sprouting, or natural recruitment from rodent seed caches (primary bitterbrush recruitment medium), is unknown within those areas that have poor form class (altered seed production) and/or exposed to moderate burn severities on affected sites.

Fire-affected quaking aspen sites could be affected by the lack of young age class recruitment if stands are not allowed to attain minimum densities, and heights out of the reach of grazing animals with any lack of livestock grazing closures and follow-up grazing management.

Other impacts resulting from the No Action Alternative would include the spread of annuals, such as cheatgrass, and nonnative invasive species, such as Scotch thistle and hoary cress. These species are already present and would continue to increase in density. The burned area would not be closed to grazing, which would not allow desirable plant species time to reestablish. It would also allow for other nonnative invasive plant species that are transported on sites by vehicles, animals or by wind to gain a niche to get established. This would have an adverse affect on native species by not allowing their preferred habitat to re-establish.

Alternative II - Proposed Action

The direct impacts to wildlife are the loss of habitat, including forage and cover. The temporary loss, and sometimes long term or permanent loss, of cover and forage on intermediate and winter big game range is a critical limiting factor for affected mule deer herd. As described in the impacts to migratory birds, the greatest threat to these sagebrush-dependent wildlife species is type conversion of sagebrush communities to non-native species. Maintaining complete, diverse sagebrush communities is integral to conservation efforts for these species. The proposed seed mixtures for emergency stabilization and rehabilitation and for rehabilitation would help to provide cover and forage for wildlife species and help to minimize establishment of noxious weeds, and exotic annual plants such as cheatgrass. The Proposed Action would also allow for any natural reestablishment of shrubs on the burned area.

Stands would be fenced, as deemed necessary and as feasible, to allow for the same. Livestock grazing closures or any needed post-fire adjustments to livestock grazing management would be completed.

F. MIGRATORY BIRDS

Alternative I - No Action

Impacts to fire-affected habitat resulting from the No Action Alternative are similar to those described for wildlife species in Wildlife subsection shown above. This would include the spread of annuals, such as cheatgrass, and nonnative invasive species, such as the Scotch thistle and hoary cress. These species are already present and would continue to increase in density. The burned area would not be closed to grazing, which would not allow desirable plant species time to reestablish. It would also allow for other nonnative invasive plant species that are transported on vehicles to gain a niche to get established. This would have an adverse affect on native species by not allowing their preferred habitat to re-establish.

Alternative II - Proposed Action

No adverse impacts have been identified as a result of the implementation of the proposed action. The greatest threat to these sagebrush-dependent migratory bird species is type conversion of sagebrush communities. Maintaining complete, diverse sagebrush communities is integral to conservation efforts for these species. Wyoming big sagebrush was negatively impacted by the fire. Wyoming and basin big sagebrush vegetation types generally do not naturally respond well to complete loss in block-burn configurations, such as large areas observed on the burn, where only relatively small intact stands still exist. Basin big sagebrush and mountain big sagebrush seed banks (viable residual seed dispersed last fall and winter) were likely lost as a result of the fire within the large blocks. Wyoming big sagebrush seed banks usually do not persist after the summer following seed dispersal in unburned areas, let alone burned areas. Recruitment would be slow from intact stands without rehabilitation.

The proposed seed mixtures would help to provide wildlife cover and forage and help to minimize establishment of exotic annual plants such as cheatgrass. This mixture would also help allow for any natural reestablishment of shrubs on the burned area. The seeding proposals should provide beneficial impacts to migratory bird species by restoring habitat and is consistent with the conservation measures listed in Section 3(e) of the President's Migratory Bird Executive Order.

G. SPECIAL STATUS SPECIES

Alternative I - No Action

If no action were to occur within the burned area, potential impacts to special status species could include permanent loss of habitat due to vegetation type-conversion or other ecosystem shifts; abandonment of habitat in the burned area; decreased reproductive rates due to insufficient food, water, or shelter and/or nutritional deficiencies; mortalities; altered foraging and breeding habits; and easier acquisition of food sources due to decreases in escape cover (particularly for raptors). The potential exists for accelerated erosion to occur within the burned area, which would result in sedimentation to crucial LCT stream habitats, mortality to some of the fish population, and reduced production of LCT.

Until the establishment of a shrub component into the vegetation community, wildlife would continue to lack a vegetative cover as a component of the habitat. Sage grouse populations would decline without reestablishment of the sagebrush component, potentially leading to listing under the Endangered Species Act. Other Special Status Species, and the prey of Special Status Species raptors, that require shrubs and quaking aspen for cover and forage on a seasonal or yearlong basis, would be negatively affected until these plants naturally reestablish on affected sites.

Alternative II - Proposed Action

Removal of livestock from the burned areas as soon as possible would allow protective buffers along drainages to remain in place. These buffers include corridors of willow and herbaceous vegetation which serve to protect streambanks from erosion and filter ash and sediment from adjacent burned areas. Sediment and ash have the potential to clog fish gills, raise water temperatures and pH levels, kill invertebrates, reduce fish spawning habitat and degrade overall water quality for aquatic wildlife species including LCT and spotted frogs. These protective riparian buffers exist along perennial drainages in most of the burn area. However, several spots along the various creeks, particularly Lone Mountain Creek, have had some high burn severity and vegetation mortality which need rest to recover adequately.

Closure of burned areas to livestock grazing would allow for growth and establishment of riparian

vegetation along drainages with persistent water. Establishment of healthy riparian zones would maintain water quality for the benefit of aquatic wildlife species including special status species. Rest from grazing would also allow increase likelihood of successful revegetation of uplands either naturally or from seeding, reducing sediment input to streams from uplands.

Road repair as well as dozer line stabilization and rehabilitation would benefit aquatic wildlife resources and riparian areas by reducing sediment loading into drainages.

Fence repair and construction are necessary to control livestock would benefit aquatic wildlife species by allowing for growth and establishment of riparian vegetation along drainages during the post-fire recovery period.

Seeding of upland and riparian areas would help to stabilize soils in the long term and help to prevent invasive species from spreading. Any needed post-fire protection or adjustments in livestock grazing would help to allow for recovery of affected aspen stands. This stabilization would slow the sediment input into LCT habitat and help to prevent mortality of the fish and eggs during spawning.

Although the suspected causes of sage grouse decline are numerous, loss of habitat, including loss by fire, ranks at the top of the list. As described in the impacts to migratory birds, the greatest threat to these sagebrush-dependent species is type conversion of sagebrush communities. Maintaining complete, diverse sagebrush communities is integral to conservation efforts for these species. The proposed seed mixtures for emergency stabilization and for rehabilitation would help to provide cover and forage for sage grouse, mammals and perching birds as well as that for prey species of Special Status Species raptors and bats, and help to minimize establishment of noxious weeds, and exotic annual plants such as cheatgrass. The Proposed Action would also allow for any natural reestablishment of shrubs on the burned area.

H. RECREATION

Alternative I - No Action

Under the no action alternative recreational pursuits such as wildlife viewing and hunting would be impacted. The loss of habitat in the burned area, if not reseeded, could lead to a permanent long term loss of wildlife species in the area. Proliferation of new routes could occur in the area due to the loss of vegetation.

Alternative II - Proposed Alternative

Under the proposed action recreational pursuits would be restored in the long term. Big Game and game bird habitat would be restored. Rehabilitating dozer lines and generally restoring vegetative cover would reduce the likelihood of creating new routes in the area.

I. CULTURAL RESOURCES

Alternative I - No Action

The no action alternative is expected to have little direct impact on archeological, historical, or ethnographic resources. Indirectly, there is a slightly greater risk that historic and prehistoric sites would suffer post-fire damage without emergency stabilization and rehabilitation actions. Overall however, this risk is relatively low and very difficult to assess; because of the tenuous nature of this risk, it is considered to be only a very minor negative impact. Without educational information and law enforcement patrols, archeological, historical, or ethnographic resources are at increased risk to damage by public land users.

Alternative II - Proposed Action

The preferred alternative is designed to minimize post fire effects to historic, prehistoric, and

traditional cultural properties by stabilizing sites where needed, use of law enforcement and providing compliance for areas proposed for post fire treatments. Surveys will be completed ahead of any ground disturbing treatments. The areas designated for drag-seeding are all located along streams, where a high site density is expected to be encountered. As a result, these areas will be fully inventoried at a Class III level prior to ground disturbing activities. Portions of the lands designated for drill seeding are also located along streams and near springs where significant cultural resources are likely to occur. Areas to be drill seeded are also located away from these well-watered zones, where site density may be reduced. The drill seedings will therefore be subjected to a minimum 30% sample inventory. A sample inventory design will be written by the BLM and approved by the Nevada SHPO prior to implementation of the cultural surveys and earth disturbing activities associated with the drill seedings. Because all significant cultural resources will be flagged for avoidance prior to earth disturbing activities, no adverse effects to archeological resources are anticipated under this alternative.

J. NATIVE AMERICAN CONSULTATION

Alternative I - No Action

Under the No Action alternative, possible Native American spiritual sites, ceremonies, or traditional practices may or may not be adversely affected by proposed project activities. For example, certain stabilization/rehabilitation projects may compromise the physical integrity of existing artifacts (such as drill seeding). However, other projects (riparian exclosures, stream bank restoration, etc…) may allow for the recovery of certain edible and medicinal plant locations.

Alternative II - Proposed Alternative

Various tribes and bands of the Western Shoshone have stated that federal projects and land actions can have widespread effects to their culture and religion as they consider the landscape as sacred and as a provider.

Due to the fact that there is limited internal knowledge (BLM) of spiritual or important cultural/traditional use sites in the area, there exists the possibility of land management practices - stabilization and rehabilitation projects - adversely affecting traditional life ways and the integrity of Native American spiritual sites or sites of cultural importance.

K. VISUAL RESOURCE QUALITY

Alternative I - No Action

The no action may cause an increase in non-native vegetation dominance in the burned areas.

Alternative II - Proposed Alternative

This action may improve visual resources through an increase in perennial vegetation and decrease in fire danger and invasive exotic plants.

L. RANGE

Alternative I - No Action

Some un-burned and burned vegetative communities could recover naturally without any proposed treatments. Because of the large size of these fires there will be pressure on un-burned islands from wildlife and livestock since no proposed treatments would allow closure to livestock.

Alternative II - Proposed Alternative

The proposed action would have both beneficial and adverse impacts on range resources. Reseeding and natural revegetation would benefit grazing once the seeded areas were sufficiently recovered and the forage base would be improved with herbaceous and palatable/nutritious species. Protective fencing would, in the short term, remove livestock from previously grazed areas, thereby resulting in a reduction of available animal use months (AUM) to livestock, but improve the chance of successful re-vegetation of burned areas.

Livestock grazing may be affected for a long term. Low average annual precipitation results in lengthy recovery time. In many areas, recovery of burned areas would involve a natural vegetation response from seed release of plant species not damaged by wildfire or re-growth from fire. In some areas, seeding would be necessary to meet resource objectives and provide for watershed stabilization. In either case, livestock grazing would need to be deferred to allow for plant re-growth and re-establishment.

Livestock grazing on allotments that are within burned area could be closed for a minimum of 2 growing seasons or until establishment objectives are met based on the Standards and Guidelines for Nevada's BLM lands. Specific vegetative objectives would be completed for the areas impacted by fires. Grazing allotment agreements or decisions would be handled on an allotment basis in order to meet vegetative objectives. Grazing may be permitted in order to meet objectives primarily to control and decrease the spread of invasive plant species during the "green up" period. Due to the extent of the fires, the vast variety of vegetative communities and ecological sites, and resource concerns burned, objectives may vary within and between fires.

The proposed alternative of seeding would have beneficial effects to watershed and soil stabilization and overall range condition. Livestock exclusion fencing would protect treated sites from impacts from cattle or other wildlife.

CHAPTER 5.0 – Cumulative Impact Analysis

All resource values have been evaluated for cumulative impacts. Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action, when added to other past, present, and reasonably foreseeable future actions, both federal and nonfederal. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The emergency stabilization and rehabilitation treatments for the Basco fire, as proposed in this plan, do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively constitute a significant impact on the quality of the environment. Cumulative impacts for proposed Emergency Stabilization treatments are discussed and analyzed in the programmatic FY 2000 Normal Fire Rehabilitation Plan Environmental Assessment (NFRPEA) BLM/EK/PL-2000/037, which resulted in a Finding of No Significant Impact. These documents are available for review at the BLM, Elko Field Office. A three year reasonably foreseeable timeframe was used since this is the maximum timeframe allowed for implementation and monitoring of emergency stabilization and rehabilitation plans.

The geographic area included in the cumulative impacts assessment is the location of the Basco Fire for the soil and vegetation resources, and the Lone Mountain, Blue Basin, Fox Springs, and Hadley North Pasture of the Hadley Allotment. The land uses evaluated that may create cumulative impacts to the resource affected by the Basco Fire, include livestock grazing, mineral exploration, recreation and fire. Livestock grazing, recreation, and fire have occurred for several years in the past to the present, and are expected to occur in the future. The Basco Fire would be closed to livestock grazing for a minimum of two growing seasons or until vegetation establishment objectives are met.

Large portions of the wildfires that have occurred in southwestern to central Elko County from 1984 to 2005 within 20 miles of the Basco Fire perimeter have been seeded with big sagebrush and at present have various degrees of re-establishment. This has helped provide cover and forage for approximately 200 wildlife species, including mule deer, which utilize sagebrush habitat types on a seasonal or yearlong basis. However, the Basco Fire has exacerbated the present limited availability of shrub cover on

collective intermediate range and migration corridors for the affected mule deer herds. The availability of adequate cover and forage provided by shrubs is presently considered to be a critical limiting factor for the affected mule deer herds when considering the wildfire-affected portions of intermediate range and migration corridor on the 73,077-acre Clover Fire in 1999, 70,910-acre Hot Lake Fire in 2001, the 21,187-acre Buffalo in 2001, and the 96,896-acre Esmeralda fire in 2005. These wildfire burn areas have prior approved emergency stabilization and rehabilitation plans that included big sagebrush seeding efforts that presently provide limited cover and forage as part of mule deer intermediate range and migration corridors.

Although the winter range area was a very small percentage of the overall acreage of the Basco Fire, there are cumulative effects on the affected mule deer herds because of fires since 1984 within Management Area Six, Units 066, 067 and 068 delineated by the Nevada Department of Wildlife (NDOW). Mule deer numbers are down dramatically from historic numbers for the affected mule deer herd area. Nevada Department of Wildlife noted in their 2004-05 Big Game Status report that, "The carrying capacity of the winter range is now estimated at between 8,000 to 10,000 deer. This is… 65% less than it was 35 to 40 years ago."

Greater sage grouse populations would continue to decline without reestablishment of the sagebrush component, potentially leading to listing under the Endangered Species Act. The stabilization and rehabilitation actions taking place on the various fires throughout the area are helping to slow this population loss but the fact that the fires have removed sagebrush in vast adjacent areas has negatively affected sage grouse and may continue to do so into the future.

Impacts to wildlife include, but are not limited, to the loss or alteration of forage and cover, wildlife may be displaced and avoid areas once inhabited due to the loss or alteration of forage and cover, migration routes may shift.

Within the fire perimeter impacts to vegetation and soils have occurred in the past and present from livestock grazing, mineral exploration, recreation, and fire. Surface disturbance within and adjacent to the burn area have been created by the installation of fences and range improvements that are associated with livestock grazing. Mineral exploration for locatable minerals has occurred over the past several years within the fire perimeter.

The Basco Fire burned in the area between the Merrimac Mining District and the Swales Mountain Mining District. In the past and prior to the implementation of the 3809 regulations, underground mining and exploration occurred in both of these districts. Since the implementation of the 3809 regulations in 1981, exploration has occurred, but no mining operations have been permitted by the BLM. The exploration activities occurring in the area of the burn have occurred under the Notice level (less than 5 acres of surface disturbance). Surface disturbance created by mineral exploration activities includes construction of roads, trenches, test pits and drill sites (pads and sumps). Reclamation of this surface disturbance consisted of recontouring and seeding the drill sites and exploration roads and backfilling, recontouring and seeding the trenches and test pits. Surface disturbance from past exploration and mining activities may still exist. Pre-1981 regulation surface disturbance may remain unreclaimed unless reworked in the present and future. Active exploration notices may continue beyond the time frame for the implementation of the ES and R plans. Notices expire in two years unless extended on a two year basis. Therefore, some surface disturbance created under a Notice may be reclaimed within the time period for the ES and R plans.

Roads have been created within and adjacent to the burn area that are associated with various activities such as, but not limited to, access for range improvements, mineral exploration, recreation, and fire suppression activities. Dozerlines have been created and used in the fire suppression tactics. Soil disturbing activities can cause changes to soil characteristics, such as pulverization or mixing of soil layers, removal of soil either by wind or water erosion, and composition changes when soils become hydrophobic as a result of heat from fires. Changes in the soil characteristics can result in changes to vegetation types and communities as well as changes to runoff and erosion rates. Cumulative impacts to

soils may be short term, lasting until soil crusts or vegetation reestablishment occurs or long term due to physical changes and natural elements, such as weathering and erosion.

Cumulative impacts to vegetation can include changes in vegetation types and communities. Establishment of nonnative invasive plant or noxious weed species or annuals, such as cheatgrass, can change the characteristics of a vegetation type or community by replacing and eliminating native species from the plant community. Seedings may or may not change the characteristics of the vegetation type or community dependant upon the plant species included in the seed mixture that is being planted. Seedings may be used to reestablish native species that have been lost as a result of fire or introduce new species, native or nonnative, to the vegetation type in order to compete with nonnative invasive plant or noxious weed species in order to help restore a productive, diverse and sustainable vegetation community. Changes in vegetation type and plant communities can result in other impacts such as the loss of vegetation for livestock grazing; loss or alteration of habitat, including forage and cover for wildlife; and the lack of plant diversity and age classification, which may also increase due to wildland fires.

According to the 2004 Fire Management Amendment to the Elko and Wells Resource Management Plans, the Elko District has experienced large fires over the last 5 years (1999-2003) with 1999 being the most active year. Annual changes in fire occurrence consist of factors such as fuel loads, change in vegetation, and climatic conditions. Wildland fire ignitions are primarily the result of lightning strikes but may also be caused by humans. Wildland fire may impact soils dependant upon the temperatures of the fire. Soils may burn or become hydrophobic. The primary resource impacted by wildland fires is to vegetation. Impacts to vegetation are also dependant upon the temperatures of the fire, which are relative to several factors such as fuel types. Impacts may include, but are not limited to, changes in successional stages of vegetation communities, alteration of habitats for wildlife, and modification of fuel loading.

CHAPTER 6.0 – Consultation and Coordination

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APPENDIX A
Migratory Birds

On January 11, 2001, President Clinton signed the Migratory Bird Executive Order 13186. This Executive Order outlines the responsibilities of federal agencies to protect migratory birds. The United States has recognized their ecological and economic value to this country and other countries by ratifying international, bilateral conventions for the conservation of migratory birds. These migratory bird conventions impose substantive obligations on the United States for conservation of migratory birds and their habitats. The United States has implemented these migratory bird conventions through the Migratory Bird Treaty Act. President Clinton's Migratory Bird Executive Order directs executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act. As defined in the executive order, "action" means a program, activity, project, official policy (such as a rule or regulation), or formal plan directly carried out by a federal agency. The executive order further states that each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement, within 2 years, a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service that shall promote conservation of migratory bird populations. The term "action" will be further defined in this MOU as it pertains to each federal agency's own authorities and programs.

A list of the migratory birds affected by the President's executive order is contained in 43 CFR 10.13. References to "species of concern" pertain to those species listed in the periodic report "Migratory Nongame Birds of Management Concern in the United States;" priority migratory bird species as documented by established plans, such as Bird Conservation Regions in the North American Bird Conservation Initiative or Partners in Flight physiographic areas; and those species listed in 50 CFR 17.11. The 1999 Nevada Partners in Flight Bird Conservation Plan identifies the following bird species for prioritization for management action associated the wild horse herd areas, as listed by habitat type in the following table.

Migratory Birds by Habitat Type

Sagebrush	Montane Riparian	Montane Shrub	Aspen	Cliffs and Talus
Obligates: Sage Grouse Other: Black Rosy Finch Ferruginous Hawk Gray Flycatcher Loggerhead Shrike Vesper Sparrow Prairie Falcon Sage Sparrow Sage Thrasher Swainson's Hawk Burrowing Owl Calliope Hummingbird Other associated species: Brewer's Sparrow Western Meadowlark Black-throated Sparrow Lark Sparrow Green-tailed Towhee Brewer's Blackbird Horned Lark Lark Sparrow	Obligates: Wilson's Warbler MacGillivray's Warbler Other: Cooper's Hawk Northern Goshawk Calliope Hummingbird Lewis's Woodpecker Red-Naped Sapsucker Orange-crowned Warbler Virginia's Warbler Yellow-breasted Chat Other Associated Species Warbling Vireo Broad-tailed Hummingbird Fox Sparrow Blue Grouse	Obligates: None Other: Black Rosy Finch Black-throated Gray Warbler Calliope Hummingbird Cooper's Hawk Loggerhead Shrike Blue Grosbeak Vesper Sparrow MacGillivray's Warbler Orange-crowned Warbler Swainson's Hawk Western Bluebird	Obligates*: None Other**: Northern Goshawk Calliope Hummingbird Flammulated Owl Lewis's Woodpecker Red-naped Sapsucker Mountain Bluebird Orange-crowned Warbler MacGillivray's Warbler Wilson's Warbler Other Associated Species Cooper's Hawk Northern Flicker Hermit Thrush Yellow-rumped Warbler Long-eared Owl	Obligates: Prairie Falcon Black Rosy Finch Other: Ferruginous Hawk Other Associated Species Golden Eagle White-throated Swift Say's Phoebe Common Raven Cliff Swallow Violet-green Swallow Canyon Wren Rock Wren

* "Obligates" are species that are found only in the habitat type described in the section. [Habitat needed during life cycle even though a significant portion of their life cycle is supported by other habitat types]

** "Other" are species that can be found in the habitat type described the Nevada Partners in Flight Bird Conservation Plan

Appendix B
BLM Special Status Species

Definitions of Special Status Species:

Federally Threatened or Endangered Species: Any species that the U.S. Fish and Wildlife Service has listed as an endangered or threatened species under the Endangered Species Act throughout all or a significant portion of its range.

Proposed Threatened or Endangered Species: Any species that the Fish and Wildlife Service has proposed for listing as a Federally endangered or threatened species under the Endangered Species Act.

Candidate Species: Plant and animal taxa that are under consideration for possible listing as threatened or endangered under the Endangered Species Act.

BLM Sensitive Species: Species 1) that are currently under status review by the U.S. Fish and Wildlife Service, 2) whose numbers are declining so rapidly that Federal listing may become necessary; 3) with typically small and widely dispersed populations; or 4) that inhabit ecological refugia or other specialized or unique habitats.

State of Nevada Listed Species: State-protected animals that have been determined to meet BLM's Manual 6840 policy definition.

The listing of Nevada BLM Special Status Species is based on input provided by BLM, Nevada Department of Wildlife, and U.S. Fish and Wildlife Service in BLM Instruction Memorandum No. NV-2003-097 (July 29, 2003).
The effects of a proposed action on species that are listed or are proposed for listing as threatened or endangered are subject to consultation under section 7 of the ESA.

Nevada BLM policy is to provide State of Nevada Listed Species and Nevada BLM Sensitive Species with the same level of protection as is provided for candidate species in BLM Manual 6840.06C. Per wording for Table IIa. in BLM Instruction Memorandum No. NV-98-013, Nevada protected animals that meet BLM's 6840 policy definition are those species of animals occurring on BLM-managed lands in Nevada that are: (1) 'protected" under authority of Nevada Administrative Codes 501.100 - 503.104; (2) have been determined to meet BLM's policy definition of "listing by a State in a category implying potential endangerment or extinction," and (3) are not already included as a federally listed, proposed, or candidate species.

The following table lists the species according to their status that are potentially affected by the proposed action specific to the propose action area.

Appendix B (Cont.)
BLM Special Status Species – Basco Fire

COMMON NAME	SCIENTIFIC NAME
Federally Endangered Species	
(None)	(None)
Federally Threatened Species	
Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*
Federally Proposed Threatened or Endangered Species	
(none)	(none)
Federal Candidate Species	
Columbia spotted frog	*Rana lutieventris*
Yellow-billed Cuckoo	*Coccyzus americanus*
Nevada BLM Sensitive Species	
Birds	
Golden Eagle	*Aquila chrysaetos*
Burrowing Owl	*Athene cunicularia*
Ferruginous Hawk	*Buteo regalis*
Swainson's Hawk	*Buteo swainsoni*
Northern Goshawk	*Accipiter gentiles*
Greater Sage Grouse	*Centrocercus urophasianus*
Mountain Quail	*Oreortyx pictus*
Loggerhead shrike	*Lanius ludovicianus*
Vesper sparrow	*Poocetes gramineus*
Short-eared owl	*Asio flammeus*
Long-eared owl	*Asio otus*
Prairie falcon	*Falco mexicanus*
Black-rosy finch	*Leucosticte atrata*
Yellow-breasted chat	*Icteria virens*
Lewis' woodpecker	*Melanerpes lewis*

Nevada BLM Sensitive Species (cont.)	
Mammals	
Pygmy rabbit	*Brachylagus idahoensis*
Spotted bat	*Euderma maculatum*
Small-footed myotis	*Myotis ciliolabrum*
Long-eared myotis	*Myotis evotis*
Fringed myotis	*Myotis thysanodes*
Long-legged myotis	*Myotis volans*
Yuma myotis	*Myotis yumanensis*
Pacific Townsend's big-eared bat	*Plecotis townsendii townsendii*
Prebles shrew	*Sorex preblei*

APPENDIX C
Wildlife Species List

Lower Sagebrush/Grassland Steppe, Northeastern Nevada
[Note: This is a partial list emphasizing upland habitat areas]

Birds

Turkey Vulture	*Cathartes aura*
Bald Eagle	*Haliaetus leucocephalus*
Northern Harrier	*Circus cyaneus*
Swainson's Hawk	*Buteo swainsoni*
Red-tailed Hawk	*Buteo jamaicensis*
Ferruginous Hawk	*Buteo regalis*
Rough-legged Hawk	*Buteo lagopus*
Golden Eagle	*Aquila chrysaetos*
American Kestrel	*Falco sparverius*
Merlin	*Falco columbarius*
Prairie Falcon	*Falco mexicanus*
Cray Partridge	*Perdix perdix*
Chukar	*Alectoris chukar*
Sage Grouse	*Centrocercus urophasianus*
Mourning Dove	*Zenaida macroura*
Great Horned Owl	*Bubo virginianus*
Burrowing Owl	*Athene cunicularia*
Short-eared Owl	*Asio flammeus*
Common Nighthawk	*Chordeiles minor*
Broad-tailed Hummingbird	*Selasphorus platycercus*
Northern Flicker	*Colaptes auratus*
Gray Flycatcher	*Epidonax wrightii*
Ash-throated Flycatcher	*Myiarchus cinerascens*
Say's Phoebe	*Sayornis saya*
Western Kingbird	*Tyrannus verticalis*
Horned bark	*Eremophila alpestris*
Barn Swallow	*Hirundo rustica*
Black-billed Magpie	*Pica pica*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Rock Wren	*Salpinctes obsoletus*
Mountain Bluebird	*Sialia currucoides*
American Robin	*Turdus migratorius*
Sage Thrasher	*Oreoscoptes montanus*
Loggerhead Shrike	*Lanius ludovicianus*
Northern Shrike	*Lanius excubitor*
European Starling	*Sturnus vulgaris*
Brewer's Sparrow	*Pooecetes gramineus*
Vesper Sparrow	*Chondestes grammacus*
Lark Sparrow	*Amphispiza belli*
White-crowned Sparrow	*Zonotrichia leucophrys*
Lapland Longspur	*Calcarius lapponicus*
Red-winged Blackbird	*Agelaius phoeniceus*
Western Meadowlark	*Sturnella neglecta*
Brewer's Blackbird	*Euphagus cyanocephalus*
Brown-headed Cowbird	*Molothrus ater*
Black Rosy Finch	*Leucosticte atrata*
Gray-crowned Rosy Finch	*Leucosticte tephrocotis*
House Sparrow	*Passer domesticus*

Mammals

Little Brown Bat	*Myotis lucifugus*
Long-eared Myotis	*Myotis evotis*
Long-legged Myotis	*Myotis volans*
Small-footed Myotis	*Myotis ciliolabrum*
Silver-haired Bat	*Lasionycteris noctivagan*
Western Pipistrelle	*Pipistrellus hesperus*
Big Brown Bat	*Eptesicus fuscus*
Townsend's Big-eared Bat	*Plecotus townsendii*
Brazilian Free-tailed Bat	*Tadarida brasiliensis*
Black-tailed Jackrabbit	*Lepus californicus*
Mountain Cottontail	*Sylvilagus nuttal1ii*
Pygmy Rabbit	*Sylvilagus idahoensis*
Townsend's Ground Squirrel	*Spermophilus townsendii*
Belding Ground Squirrel	*Spermophilus be1dingi*
Least Chipmunk	*Tamias minimus*
Botta's Pocket Gopher	*Thomomys bottae*
Northern Pocket Gopher	*Thomomys talpoides*
Little Pocket Mouse	*Perognathus longimembris*
Great Basin Pocket Mouse	*Perognathus parvus*
Dark Kangaroo Mouse	*Microdipodops megacephalus*
Ord Kangaroo Rat	*Dipodomys ordii*
Chisel-toothed Kangaroo Rat	*Dipodomys microps*
Deer Mouse	*Peromyscus maniculatus*
Northern Grasshopper Mouse	*Onychomys leucogaster*
Desert Woodrat	*Neotoma lepida*
Sagebrush Vole	*Lemmiscus curtatus*
House Mouse	*Mus musculus*
Kit Fox	*Vulpes macrotis*
Coyote	*Canis latrans*
Long-tailed Weasel	*Mustela frenata*
Badger	*Taxidea taxus*
Striped Skunk	*Mephitis mephitis*
Mountain Lion	*Felix concolor*
Bobcat	*Lynx rufus*
Mule Deer	*Odocoileus hemionus*
Pronghorn	*Antilocapra americana*

Reptiles

Western Skink	*Eumeces skiltonianus*
Western Whiptail	*Cnemidophorus tigrus*
Desert Collared Lizard	*Crotaphytus insularis*
Long-nosed Leopard Lizard	*Gambelia wislizenii*
Desert Spiny Lizard	*Sceloporus magister*
Sagebrush Lizard	*Sceloporus graciosus*
Western Fence Lizard	*Sceloporus cccidentalis*
Side-blotched Lizard	*Uta stansburiana*
Desert Horned Lizard	*Phrynosorna platyrhinos*
Short-horned Lizard	*Phrynosorna douglassii*
Long-nosed Snake	*Rhinocheilus lecontei*
Ground Snake	*Sonora semiannulata*
Night Snake	*Hypsiglena torquata*
Gopher Snake	*Pituophis melanoleucus*
Racer	*Coluber constrictor*
Striped Whipsnake	*Masticophis taeniatus*
Western Rattlesnake	*Crotalus viridis*